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TITLE Barrier Metal Film Producing Method Using Atomic Layer Deposition Method

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APPLICANT(S) SAMSUNG ELECTRONICS CO. LTD.

INVENTOR(S) Rinso ZEN, Shohan KYO, Genshaku RIN & Kichigen SAI

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ABSTRACT

PROBLEM - To offer a barrier metal film producing method using an atomic layer deposition method.

SOLUTION - The method comprises a step of pulsing a first source gas onto the entire surface of a semiconductor substrate loaded into the chamber of an atomic layer deposition apparatus from a time A1 to a time A2, and a step of pulsing a second source gas reacting with the above-mentioned first source gas onto the entire surface of the above-mentioned semiconductor substrate from a time A3 to a time A4, thereby to form a barrier metal film of a predetermined thickness, and is characterized in that A3 is simultaneous to or later than A1, and simultaneous to or earlier than A2.

